

### **REMARKS**

In view of the following remarks, the Examiner is requested to allow Claims 1-7, 9 and 10, the only claims pending and under examination in this application.

#### ***Claim Rejections 35 U S C § 103***

Claims 1-6 are rejected under 35 U S C 103 (a) as being unpatentable over Taylor in view of Nova et al.

In order to meet its burden in establishing a rejection under 35 U.S.C. § 103 the Office must first demonstrate that the combined prior art references teach or suggest all the claimed limitations. See, for example:

- *Pharmastem Therapeutics v. Viacell et al.*, 2007 U.S. App. LEXIS 16245 (Fed. Cir. 2007) which states that "the burden falls on the patent challenger to show by clear and convincing evidence that a person of ordinary skill in the art would have had reason to attempt to make [every element of] the composition or device, or carry out the [entire] claimed process, and would have had a reasonable expectation of success in doing so," (citing *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1740 (2007));
- *Omegaflex, Inc. v. Parker-Hannifin Corp.*, 2007 U.S. App. LEXIS 14308 (Fed. Cir. 2007) which states that "[t]he Supreme Court recently explained that 'a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art,'" (citing *KSR Int'l Co.* at 1741); and
- *Dystar Textilfarben GmbH v. C.H. Patrick Co.*, 464 F.3d 1356, 1360 (Fed. Cir. 2006) which states that "[once] all claim limitations are found in a number of prior art references, the factfinder must determine '[w]hat the prior art teaches, whether it teaches away from the claimed invention, and whether it motivates a combination of teachings from

different references,” (citing *In re Fulton*, 391 F.3d 1195, 1199-1200 (Fed. Cir. 2004)).

The claimed invention is drawn to virtualizing microarray systems that includes a microarray containing a number of features, a memory containing data for each feature of the microarray and a logic component. The logic controls a microarray processing component (e.g., a microarray scanner, a microarray-data processing system, or a microarray-data visualization system) to generate a virtual microarray comprising data describing a subset of the features of the microarray. This element of the claimed invention, as described, for example, on page 15 of the specification, allows for the identification of a subset of features on a microarray which are to be processed and analyzed during the course of the microarray processing stream (thereby excluding the non-identified features during this process).

The Applicants again submit that neither Taylor nor Nova teaches or suggests a microarray system that is configured to produce a virtualized microarray comprising data describing a subset of the features on a single microarray using logic that controls a microarray processing component as is claimed. As detailed in previous responses, Taylor teaches selecting distinct feature data from a plurality of previously-processed microarray data sets to generate a virtual output that is of particular interest to a user (see the Abstract and Summary of the Invention sections of Taylor). As Nova is cited merely for its teaching of memory components associated with a microarray (and not virtualizing a single microarray), it fails to remedy this deficiency in Taylor.

In maintaining this rejection, the Examiner asserts that “Taylor shows using a portion of the data of a single microarray at least in paragraphs 28, 29, and 34.” See Office Action, page 5, lines 10-11. For the Examiner’s convenience, the cited paragraphs of Taylor are shown below.

[0028] A class representing a virtual microplate or microarray should support the following actions: creation; display of the virtual microplate or microarray; display of virtual spots or virtual wells; selection of virtual spots or virtual wells; search refinements; deletion of virtual wells and virtual spots; deletion of virtual microplates or microarrays; and saving and loading virtual microplates and microarrays to and from a database.

[0029] A virtual microplate or microarray should be created as the result of a selection of wells or spots either manually or by search process. The dimensions of a virtual microplate or microarray (i.e., rows and columns) should be computed (or recomputed) as necessary.

[0034] A researcher should be allowed to delete a virtual well or virtual spot by selecting a virtual well or virtual spot and indicating to the computing device that the virtual well or virtual spot should be deleted. When this occurs, the virtual well or virtual spot is removed from the virtual microplate or virtual microarray.

*Taylor, paragraphs 0028, 0029, and 0034.*

Applicants submit that the cited paragraphs fail to teach generating a virtual microarray from a single microarray as claimed. Rather, these paragraphs merely describe actions that can be executed to produce the disclosed virtual microarrays. Nowhere do these paragraphs describe virtualizing a single microarray.

Furthermore, the abstract of Taylor defines the virtual microplates disclosed therein as “correspond[ing] to a plurality of physical microplates, the virtual microplate comprising a first virtual well associated with a first physical well of a first physical microplate and a second virtual well associated with a second physical well of a second physical microplate.” As such, it is evident that Taylor does not virtualize a single microarray using logic that controls a microarray processing component as is claimed. Rather, Taylor merely compiles a portion of the data from multiple individual microarrays to create a virtual output.

Applicants further submit that Taylor fails to even suggest a virtual microarray comprising data describing a subset of the features of a single microarray. Indeed, Taylor teaches away from this claimed element. As described in Taylor’s paragraph 004, Taylor’s virtual output is invented to meet

the “need to organize, arrange, and display for evaluation voluminous, complex data sets from microassay research in an efficient and lucid manner.” Taylor is particularly interested in handling voluminous and complex data sets from a large number of microarrays such as high-throughput screening (HTS) (See Taylor, paragraph 0003). As such, Taylor teaches away from a virtual microarray comprising data describing a subset of the features of a single microarray.

In the light of the above analysis, the Applicants submit that the combined teachings of Taylor in view of Nova fail to establish a *prima facie* case of obviousness. Withdrawal of this rejection is thus respectfully requested.

Claims 1, 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor in view of Nova, and further in view of Ramdas.

As discussed in detail in the previous section, the Applicants submit that neither Taylor nor Nova teach or suggest a microarray system that is configured to virtualize a single microarray using logic that controls a microarray processing component as is claimed. Indeed, Taylor specifically teaches away from this claimed element.

Ramdas is cited by the Examiner for its teaching of automated analysis of microarrays using scanners and computer controlled visualization systems. However, the Applicants submit that these asserted teachings of Ramdas fail to remedy the deficiencies in Taylor and Nova recited above. Specifically, Ramdas fails to teach or suggest a virtualizing microarray system that includes logic that controls a microarray processing component to generate a virtual microarray comprising data describing a subset of the features of the microarray as is claimed.

In view of the claim amendments and the arguments above, the Applicants submit that the combined teachings of Taylor in view of Nova and

further in view of Ramdas fail to establish a *prima facie* case of obviousness.  
Withdrawal of this rejection is thus respectfully requested.

**CONCLUSION**

In view of the amendments and remarks above, the Applicants respectfully submit that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone Bret Field at (650) 833-7770.

The Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§ 1.16 and 1.17 which may be required by this paper, or to credit any overpayment, to Deposit Account No. 50-1078, order number 10020348-1.

Respectfully submitted,  
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